

What is claimed:

1. In a catheter for use in biliary procedures including a shaft having a proximal end and a distal end, the improvement comprising:

5           a guidewire lumen carried by the shaft extending from a location proximal the distal end of the shaft to a location proximate the distal end of the shaft; and  
          means for accessing the guidewire lumen from a location exterior to the catheter shaft, located distal  
10       the proximal end of the shaft.

2. The catheter of claim 1 wherein the guidewire lumen is formed integral the shaft.

15       3. The catheter of claim 1, wherein the means for accessing the guidewire lumen includes an opening extending through the wall of the catheter shaft into the guidewire lumen.

20       4. The catheter of claim 3, further wherein the wall of the catheter shaft defined by the guidewire lumen includes a relatively weak area extending longitudinally between the opening and the distal end of the shaft.

25       5. The catheter of claim 4, wherein the weak area is perforated.

6. The catheter of claim 3, further comprising a tool for guiding a guidewire into the opening.

5 7. The catheter of claim 1, wherein the means for accessing the lumen includes a slit in the wall of the catheter shaft.

10 8. The catheter of claim 1, further including an ancillary lumen extending between the catheter proximal end and the catheter distal end.

9. The catheter of claim 1, wherein the means for accessing the guidewire lumen includes:

15 a first opening through the wall of the catheter shaft into the guidewire lumen located proximal the distal end of the shaft;

a second opening through the wall of the shaft located proximal the first opening; and

20 a channel which gives access to the guide wire lumen extending longitudinally between the first opening and the second opening.

25 10. The catheter of claim 9, wherein the channel includes an opening extending longitudinally between the first opening and the second opening in communication with the guidewire lumen.

11. A biliary rapid exchange catheter comprising:

a biliary catheter sized for passage within an endoscope including a shaft having a proximal end and a distal end;

5 a tubular member having a proximal end, a distal end, and a guidewire lumen extending longitudinally therethrough, the tubular member extending between a location proximate the distal end of the shaft and a location proximal of the distal end of the shaft; and

10 a distal port in communication with the guidewire lumen, at a location proximal of the distal end of the shaft.

12. The biliary catheter of claim 11 wherein the distal port is located at the proximal end of the tubular member.

13. The biliary catheter of claim 11, wherein the guidewire lumen extends between the proximal end and the distal end of the shaft.

20 14. The biliary catheter of claim 11, wherein the guidewire lumen includes a weakened area extending longitudinally between the distal port and the distal end of the shaft.

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15. The biliary catheter of claim 11, further including an ancillary lumen extending between the proximal end and the distal end of the shaft.

5           16. The biliary catheter of claim 11, further including:

          a proximal port into the guidewire lumen at a location proximal of the distal port; and

          means extending longitudinally between the proximal port and the distal port for allowing a guidewire to be  
10           moved between a location exterior of the guidewire lumen and the guidewire lumen.

15           17. The biliary catheter of claim 16, wherein the means for allowing the guidewire to be moved between a location exterior the guidewire lumen and the guidewire lumen includes an open channel extending longitudinally between the proximal port and the distal port.

20           18. The biliary catheter of claim 16, wherein the means for allowing the guidewire to be moved between a location exterior the guidewire lumen and the guidewire lumen includes a weakened portion within the tubular member extending longitudinally between the proximal port and the distal port.

25           19. The biliary catheter of claim 18, wherein the weakened portion is perforated.

20. The biliary catheter of claim 11, wherein the tubular member is formed integral the shaft.

21. The biliary catheter of claim 11, wherein the  
5 tubular member is coupled to the shaft.

22. A method of positioning a biliary catheter including a shaft having a proximal end and a distal end, within a patient's alimentary canal comprising the steps of:

10 providing a guidewire lumen within the catheter, extending from a location proximal the distal end of the shaft to a location proximate the distal end of the shaft;

15 providing a port through a sidewall of the shaft into the guidewire lumen, the port located distal of the proximal end of the shaft; and

moving a guidewire through the port, relative to the shaft.

20 23. The method of claim 22, further comprising the step of advancing the catheter over the guidewire.

24. A method of exchanging a catheter during a biliary endoscopic procedure comprising the steps of:

25 passing an endoscope having a lumen extending longitudinally therethrough, through a patient's mouth

into the alimentary canal;

positioning a distal end of the endoscope proximate the opening into the biliary tree;

passing a guidewire through the lumen of the endoscope;

providing a catheter having a guidewire lumen carried by the shaft extending from a location proximal a distal end of the shaft to a location proximate the distal end of the shaft, including a first opening into the guidewire lumen located distal the proximal end of the shaft; and

advancing the catheter over the guidewire, wherein a proximal end of the guidewire exits the first opening.

25. The method of claim 24, further including the step of retracting the catheter over the guidewire.

26. The method of claim 25, wherein the catheter is retracted over the guidewire until the opening is outside of the proximal end of the endoscope, wherein the catheter has a weakened area extending longitudinally between the opening and the distal end of the catheter, further comprising the step of peeling the catheter away from the guidewire.

27. The method of claim 24, wherein the catheter further includes a second opening into the guidewire lumen, with a

channel extending longitudinally between the first opening and the second opening, further comprising the step of passing the guidewire through the channel until the guidewire exits the second opening.

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28. The catheter of claim 10, wherein the guidewire lumen has a diameter, and the channel opening has a width allowing for radial guidewire removal.

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29. The catheter of claim 17, wherein the guidewire lumen has a diameter, and the open channel has a width allowing for radial guidewire removal.